localities, that object could be obtained by propulsion through the agency of steam: the *artificial* supplies the place of the *natural* in hydraulics, for all the existing companies use none other.

Such being the case, the agency of a natural fall to the capital which might be adequate to serve the highest houses, is, according to all antecedent practice, supererogatory.

The plans of the Bushey artesian supply contemplated a natural fall; so also did the colossal project of the engineer who proposed to withdraw the waters of Lake Bala from North Wales. This latter would be certainly a most formidable undertaking,—first, on account of its length (150 miles), and the obstacles that should be overcome in the transit,—next the expense of practication; but when we compare the vast works of the Croton aqueduct, and the fact that the city of New York containing 500,000 inhabitants achieved it, there is little difficulty in supposing that a metropolis that commands the trade of the world, which has the control of the funds, the material, and the labour essential to the perfection of such a scheme, could carry out the object. As yet no other source of perfectly pure water has been set forth in any scheme. Whatever merit is attached to the Bushey plan (despite its hardness), it certainly has not the recommendation of source that is certain and inexhaustible; whereas that from Bala presents every requisite which can be desired—a superabundant supply of the purest quality, and such as no other district of great Britain offers. The lake is fed by lofty mountains of rocky structure (chiefly slate): it passes through few, if any, morasses or bogs; whilst the soil of Bagshot, Little Hill, and the Hindhead, are of a sandy nature, covered with heather and peat, over which the search for water (even after rain falls) would be as fruitless as in the dry diggings of California during the dry season.

Some time since THE BUILDER noticed a general plan of sewers for the metropolis, which should combine all the underground conduits in one great leading main. That plan I heard proposed by Mr. Moffett many years back, and originated, I believe, with him: it was to form in every street a *central tunnel*, through which the sewage might take the bottom range (to be divided from the surface water) next the water of life, and the gas to be conducted along the roof, leaving room for the electric telegraph, or any other subtle element of nature that may be as yet undeveloped, and which may stand over for the ingenuity of unborn philosophers.

This plan, if ever carried into execution, will certainly obviate the necessity for ripping up, re-paving, and re-ripping the causeways, but cannot be carried out during the Metropolitan (or rather Metro-cosmopolitan) Fair of 1851; and if other associated company schemes were alike deferred, there would be little time remaining to have this Babylon swept and garnished, and put into a condition befitting the mistress of cities, when she is going to have open house to receive the world!

One of the newest of these speculations is the production of gas from water. That the thing can be done has been proved; it only remains to adopt the discovery to general use. In such case, away with the gas mains, for the water pipe supplies that element; but in case it did not, then the day is not far distant when the *débris* of coal-pits will be converted into the subtle vapour, and sent forward, over hill and dale, to our street ranges, in one iron tube to feed the countless jets which enlighten science and labour, and to supplant huge kitchen-range furnaces by the candescent flicker of a lambent flame.

Many of the suggestions put forward by THE BUILDER seem to have met general approbation, and some of them have even been carried out; and although the similarity of modes of thought occurring to minds similarly constructed, may have pictured such a train to others, who at the same time brought not forth the conception, yet, if an idea flung at random have the effect of bringing to vitality the still-born thought, the end is answered, and none of your communicants will complain less of the realisation of their own peculiar phantasies than

QUONDAM.

UNDERGROUND STEAM ENGINE IN TAMAR LEAD MINES.

OUR notice of the flue formed from the Tamar lead mines having excited much attention, we have received several communications on the subject. It is but justice to state, that the project of putting the engine there emanated from Dr. Spurgin, and that consequently the engine, and the shaft sinking by its aid, are designated by his name. The results are likely to be of such benefit, we are told, to the mine, that other mines, which by reason of their depth cannot be worked on a profit (or the mineral beneath may be from other causes inaccessible), are now likely to be resumed, and, in fact, a new depth of metallic riches opened up by degrees. The cost of the working of the engine for coal for 24 hours is 2s. 6d.; for oil, tallow, &c. 1s.; and for two engine men, 5s.—total 8s. 6d. We hope Dr. Spurgin will send a model of the arrangement to the Great Exhibition of 1851.

NOTES IN THE PROVINCES.

IN removing some plaster from the interior of Penally church, near Tenby, a star-shaped pattern was found to have been painted on the walls, with figures in ring-mail armour, apparently of the twelfth or thirteenth century. Two pieces of an ancient stone cross have also been discovered. —— A new gas company in course of formation at Newport, in Wales, have resolved to charge a maximum price not to exceed 4s., in place of the 6s. charged by the old company though coal is to be had from the pit close at hand at a very moderate cost.——So great is the demand for dwelling-houses at St. Helen's, says the *Liverpool Times*, that it is almost impossible to build them fast enough, and there is scarcely a glass, chemical, alkali, copper, or other work where great and extensive alterations and enlargements are not in progress or already made.——The *Albion* states that a Patent Law Reform Association is about to be formed in Liverpool to support the movement in the metropolis against the existing law.——So indignant are many of the Sheffield people at the alleged deterioration of quality in the gas supplied to them, that they propose to manufacture it for themselves in future. Some logicians, we perceive, who still regard the demonstrated *fact* that prices have been, and, in many cases, still are, far too high, as a mere *hypothesis*, most inconsistently argue that such prices are not charged in order "to enhance the dividends of the shareholders, seeing [through the clear spectacles of THE BUILDER] that that course, when adopted, fails to attain the object sought," but that it is in order to *remunerate them* for leakage! We should have thought that the way to enhance the dividends would have been the best way to attain such an object, but we fear that too many companies have really acted on the absurd *hypothesis* that screwing at the spigot would best compensate for leakage at the bunghole.——The Northampton Gas Company have resolved to reduce the price of their gas to 5s. a thousand cubic feet, with 10 per cent. discount to annual consumers of 250,000 feet and upwards. The local *Herald* complains much of deficient quantity, and urges an increased supply, which the company may depend on it will henceforth be more requisite than ever.——The baths and washhouses recently erected by Sir B. Heywood, at Miles Platting, at a cost of 2,500*l.*, already nearly pay their own expenses, and a full return for the capital is of course anticipated.——The Salford Council are about to sewer and drain, level, flag, and pave, a number of the newer streets of the town, such as Walker, Chadwick, Prescott, and Crowder Streets.——Blackpool is about to be lighted with gas. The Vegetable Oil Gas Company, Vauxhall, London, have undertaken to supply the town for five years, at their own risk. It is to be hoped that "vegetable oil" companies will be more successful than whale and other "animal oil" companies were. The material, however much better adapted to gas lighting, we should fear, will, in course of time, be too limited in quantity, as well as increased in price.——It is proposed to enlarge the parish Church of Bradford, which is now far too limited for the requirements of the parishioners.——A mechanics' institution is in course of establishment at Ossett.——Notice has been given of an intention to apply to Parliament for powers to supply Stockton, Middlesbrough, Yarm, &c., with water, and to unite for this purpose with the Darlington Gas and Water Company. It is proposed that the pipes shall be laid by the side of the Darlington, Stockton, and Middlesbrough Railway—an economical plan, suggested by the *Gateshead Observer*.——The Bishop of Durham has presented 500*l.* towards the restoration of the dormitory of the ancient monastery attached to Durham Cathedral. The Dean and Chapter have also granted 1,000*l.* for the same purpose, in addition to nearly an equal sum already expended on the fabric. This building is believed to be the largest room in the kingdom, except Westminster Hall. It is at present intended to fit it up as a library, or as a library and museum.

ARCHITECTS' BENEVOLENT SOCIETY.

A MEETING of architects was held on Wednesday, in the Freemasons' Tavern, Great Queen-street, in order to lay the foundations of the Architects' Benevolent Society; Mr. Sydney Smirke in the chair.

In his opening address, the chairman said that they were assembled together upon an occasion of great interest, and under circumstances which deeply affected the character, and honour and welfare of their profession. In forming this society, they were about to perform a duty which appeared to him to have been too long delayed. It was a duty incumbent upon them not only as members of a large and honourable profession, but as Christian men. A doubt had been expressed as to how far the peculiar nature of their profession was such as to render necessary or justifiable the establishment of this society. It had been argued that there were already two funds, viz., the Artists' Fund and the Artists' General Benevolent Society, which afforded relief to necessitous architects; and there was also the "Jerningham Fund," which was exclusively devoted to the benefit of this profession. This doubt he considered of such vital importance that it might be said to involve the whole spirit of the question which they were met to discuss. He (Mr. Smirke) would briefly state the motives which had influenced himself and those who were associated with him in the part they had taken in the establishment of this society. The Artists' Fund came into existence in the year 1810, and the Artists' General Benevolent Society in 1814. Since these periods the number of architects had greatly increased in this country, and therefore it was necessary that they should have additional means of affording relief in case of need. In the city of Edinburgh, previous to the year 1812, there were only six practising architects. In 1846 this number had increased to thirty-seven. In Newcastle, in the year 1812, there was only one architect, and at the present time there were twenty practising in that town. In Liverpool, during the early part of the present century, the architects numbered nine or ten, and there were now 75 or 80. In Manchester, in the year 1808, there was one architect, and there were now 34. In the town of Leeds during the early part of the present century, there were two or three, and as late as 1845 there were only four or five; but the number had now increased to twelve. In the city of Exeter, previously to 1846, there was not one practising architect, and there were at the present moment six or seven. The same principle of calculation will apply to almost every provincial town in England. In London, it would appear that at the beginning of the present century there were only ten or twelve architects. In the directory for 1812 the number had increased to twenty-three; and in the year 1850 there were no less than 750 practising architects. There could be no doubt that there had been a similar increase in the other branches of the fine arts. Under these circumstances, he felt sure that the meeting would concur with him in this position, viz., that if the two societies that existed were only just sufficient to meet the wants of the profession in former years, they must necessarily now be entirely insufficient; or if, on the contrary, the funds of these societies are sufficient for all their present wants, then it must follow that their means formerly have been extravagantly too much, and quite disproportioned to their object.

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